

STATEMENT OF BASIS

as required by LAC 33:IX.3109, for draft **Louisiana Pollutant Discharge Elimination System Permit No. LA0020354; AI 33849; PER20070001** to discharge to waters of the State of Louisiana as per LAC 33:IX.2311.

The **permitting authority** for the Louisiana Pollutant Discharge Elimination System (LPDES) is:

Louisiana Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

- I. THE APPLICANT IS:** Town of Zwolle
Zwolle Municipal Wastewater Facility
P.O. Box 546
Zwolle, LA 71486
- II. PREPARED BY:** Eura DeHart
- DATE PREPARED:** August 21, 2007
- III. PERMIT ACTION:** reissue LPDES permit LA0020354, AI 33849; PER20070001

LPDES application received: April 30, 2007

EPA has not retained enforcement authority.

LPDES permit issued: April 26, 2002

LPDES permit expired: April 30, 2007

IV. FACILITY INFORMATION:

- A. The application is for the discharge of treated sanitary wastewater from a publicly owned treatment facility serving the Town of Zwolle.
- B. The permit application does not indicate the receipt of industrial wastewater.
- C. The facility is located at 3380 Bucky Murdock Rd. in Zwolle, Sabine Parish.
- D. The treatment facility consists of a two-cell oxidation pond with duckweed, filtration system, and a mechanical aeration system. Disinfection is by chlorination.
- E. Outfall 001

Discharge Location: Latitude 31° 37' 24" North
Longitude 93° 38' 30" West

Description: treated sanitary wastewater

Design Capacity: 0.80 MGD

Type of Flow Measurement which the facility is currently using:
Totalizing Meter

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V. RECEIVING WATERS:

The discharge is into Bayou Scie; thence into Bayou San Miguel in segment 110101 of the Sabine River Basin. This segment is listed on the 303(d) list of impaired waterbodies.

The designated uses and degree of support for Segment 110101 of the Sabine River Basin are as indicated in the table below^{1/}:

Overall Degree of Support for Segment 110101	Degree of Support of Each Use						
Partial	Primary Contact Recreation	Secondary Contact Recreation	Propagation of Fish & Wildlife	Outstanding Natural Resource Water	Drinking Water Supply	Shell fish Propagation	Agriculture
	Full	Full	Not Supported	N/A	N/A*	N/A	Full

^{1/}The designated uses and degree of support for Segment 110101 of the Sabine River Basin are as indicated in LAC 33:IX.1123.C.3, Table (3) and the 2004 Water Quality Management Plan, Water Quality Inventory Integrated Report, Appendix A, respectively.

*The drinking water use applies only to the Toledo Bend Reservoir–Texas–Louisiana Line to Toledo Bend Dam. Surface waters designated as drinking water supplies are identified in the numerical criteria tables; this designation does not apply to their tributaries or distributaries unless so specified (33:IX.1111.D).

VI. ENDANGERED SPECIES:

The receiving waterbody, Subsegment 110101 of the Sabine River Basin, is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U. S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated October 21, 2005 from Watson (FWS) to Gautreaux (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. It was determined that the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

VII. HISTORIC SITES:

The discharge is from an existing facility location, which does not include an expansion beyond the existing perimeter. Therefore, there should be no potential effect to sites or properties on or eligible to for listing on the National Register of Historic Places, and in accordance with the 'Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits' no consultation with the Louisiana State Historic Preservation Officer is required.

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VIII. PUBLIC NOTICE:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit modification and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List

For additional information, contact:

Mr. Eura DeHart
Permits Division
Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

IX. PROPOSED PERMIT LIMITS:

Subsegment 110101, Toledo Bend Reservoir -- Texas-Louisiana Line to Toledo Bend Dam, is listed on LDEQ's Final 2005 303(d) list as impaired for mercury. Although the TMDL's for the Sabine River Basin were due to be completed by March 31, 2007, a TMDL has not yet been developed for mercury for this waterbody. A TMDL will be scheduled following completion of the EPA Consent Decree TMDL schedule. A reopener clause is being placed in Part II of the permit to allow for more stringent or additional limitations or requirements to be placed in the permit, if needed, as a result of the TMDL.

Mercury

The mercury impairment listed for subsegment 110101 applies only to those waterbodies specifically identified in LDEQ's Final 2005 Integrated Report, and not to the entire subsegment unless so specified. Because the discharge from this facility is not directly into Toledo Bend Reservoir, mercury will not be addressed in permit development.

Final Effluent Limits:**OUTFALL 001**

Final limits shall become effective on the effective date of the permit and expire on the expiration date of the permit.

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Effluent Characteristic	Monthly Avg. (lbs./day)	Monthly Avg.	Weekly Avg.	Basis
BOD ₅	67	10 mg/l	15 mg/l	Limits are set in accordance with the Statewide Sanitary Effluent Limitations Policy (SSELP) for facilities of this treatment type and size.
TSS	100	15 mg/l	23 mg/l	The TSS effluent limitations shall be based on a case-by-case evaluation of the treatment technology being utilized at a facility. Therefore, a Technology Based Limit has been established through Best Professional Judgement for the type of treatment technology utilized at this facility and the previous permit.

Other Effluent Limitations:**1) Fecal Coliform**

The discharge from this facility is into a water body which has a designated use of Primary Contact Recreation. According to LAC 33:IX.1113.C.5.a, the fecal coliform standards for this water body are 200/100 ml and 400/100 ml. Therefore, the limits of 200/100 ml (Monthly Average) and 400/100 ml (Weekly Average) are proposed as Fecal Coliform limits in the permit. These limits are being proposed through Best Professional Judgement in order to ensure that the water body standards are not exceeded, and due to the fact that existing facilities have demonstrated an ability to comply with these limitations using present available technology.

2) pH

According to LAC 33:IX.3705.A.1., POTW's must treat to at least secondary levels. Therefore, in accordance with LAC 33:IX.5905.C., the pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time.

3) Solids and Foam

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

X.**PREVIOUS PERMITS:**

LPDES Permit No. LA0020354: Issued: April 26, 2002
Expires: April 30, 2007

Effluent Characteristics**Discharge Limitations****Monitoring Requirements****Daily Avg. Daily Max.****Measurement Sample****Frequency****Type****Flow****Report****Report****Continuous****Recorder**

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BOD ₅	10 mg/l	15 mg/l	1/week	3 Hr. Composite
Total Suspended Solids	15 mg/l	23 mg/l	1/week	3 Hr. Composite
Fecal Coliform Bacteria	200	400	1/week	Grab
pH			1/week	Grab

XI.

ENFORCEMENT AND SURVEILLANCE ACTIONS:
A) Inspections

A review of the files indicates that no recent inspections were performed for this facility.

B) Compliance and/or Administrative Orders

A review of the files indicates that no recent enforcement actions have been administered against this facility.

C) DMR Review

A review of discharge monitoring reports for the period beginning July 1, 2004 through May 31, 2007 has revealed the following violations:

Parameter	Outfall	Period of Excursion	Permit Limit	Reported Quantity
BOD ₅ , Monthly Avg.	001	July 2004	10 mg/l	12.4 mg/l
BOD ₅ , Weekly Avg.	001	July 2004	15 mg/l	18.2 mg/l
TSS, Monthly Avg.	001	July 2004	15 mg/l	22.5 mg/l
TSS, Weekly Avg.	001	July 2004	23 mg/l	32.8 mg/l
BOD ₅ , Monthly Avg.	001	August 2004	10 mg/l	16.3 mg/l
BOD ₅ , Weekly Avg.	001	August 2004	15 mg/l	29.4 mg/l
TSS, Monthly Avg.	001	August 2004	15 mg/l	47.7 mg/l
TSS, Weekly Avg.	001	August 2004	23 mg/l	78.7 mg/l
BOD ₅ , Monthly Avg.	001	September 2004	10 mg/l	10.3 mg/l
BOD ₅ , Weekly Avg.	001	September 2004	15 mg/l	15.6 mg/l
TSS, Monthly Avg.	001	September 2004	15 mg/l	30.7 mg/l
TSS, Weekly Avg.	001	September 2004	23 mg/l	48.0 mg/l
BOD ₅ , Monthly Avg.	001	October 2004	10 mg/l	18.7 mg/l
TSS, Monthly Avg.	001	October 2004	15 mg/l	21.0 mg/l
TSS, Weekly Avg.	001	October 2004	23 mg/l	29.2 mg/l
BOD ₅ , Monthly Avg.	001	November 2004	10 mg/l	10.2 mg/l
BOD ₅ , Weekly Avg.	001	November 2004	15 mg/l	15.9 mg/l
TSS, Monthly Avg.	001	November 2004	15 mg/l	27.6 mg/l
TSS, Weekly Avg.	001	November 2004	23 mg/l	37.2 mg/l
Fecal Coliform, Weekly Avg.	001	November 2004	400 cfu/100 ml	2360 cfu/100 ml
BOD ₅ , Monthly Avg.	001	December 2004	10 mg/l	10.5 mg/l
BOD ₅ , Weekly Avg.	001	December 2004	15 mg/l	17.7 mg/l
TSS, Monthly Avg.	001	December 2004	15 mg/l	50.3 mg/l
TSS, Weekly Avg.	001	December 2004	23 mg/l	67.0 mg/l
Fecal Coliform, Weekly Avg.	001	December 2004	400 cfu/100 ml	904 cfu/100 ml
BOD ₅ , Monthly Avg.	001	January 2005	10 mg/l	10.5 mg/l
TSS, Monthly Avg.	001	January 2005	15 mg/l	57.6 mg/l
TSS, Weekly Avg.	001	January 2005	23 mg/l	63.6 mg/l

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Fecal Coliform, Weekly Avg.	001	January 2005	400 cfu/100 ml	2400 cfu/100 ml
TSS, Monthly Avg.	001	February 2005	15 mg/l	41.3 mg/l
TSS, Weekly Avg.	001	February 2005	23 mg/l	52.5 mg/l
BOD ₅ , Monthly Avg.	001	March 2005	10 mg/l	12.11 mg/l
BOD ₅ , Weekly Avg.	001	March 2005	15 mg/l	30.7 mg/l
TSS, Monthly Avg.	001	March 2005	15 mg/l	41.4 mg/l
TSS, Weekly Avg.	001	March 2005	23 mg/l	58.0 mg/l
Fecal Coliform, Weekly Avg.	001	March 2005	400 cfu/100 ml	1872 cfu/100 ml
BOD ₅ , Monthly Avg.	001	April 2005	10 mg/l	10.6 mg/l
TSS, Monthly Avg.	001	April 2005	15 mg/l	48.9 mg/l
TSS, Weekly Avg.	001	April 2005	23 mg/l	60.5 mg/l
TSS, Monthly Avg.	001	May 2005	15 mg/l	20.6 mg/l
TSS, Weekly Avg.	001	May 2005	23 mg/l	49.6 mg/l
BOD ₅ , Monthly Avg.	001	June 2005	10 mg/l	13.7 mg/l
BOD ₅ , Weekly Avg.	001	June 2005	15 mg/l	19.6 mg/l
TSS, Monthly Avg.	001	June 2005	15 mg/l	25.3 mg/l
TSS, Weekly Avg.	001	June 2005	23 mg/l	52.0 mg/l
Fecal Coliform, Weekly Avg.	001	June 2005	400 cfu/100 ml	3200 cfu/100 ml
BOD ₅ , Monthly Avg.	001	July 2005	10 mg/l	15.74 mg/l
BOD ₅ , Weekly Avg.	001	July 2005	15 mg/l	24.24 mg/l
TSS, Monthly Avg.	001	July 2005	15 mg/l	28.3 mg/l
TSS, Weekly Avg.	001	July 2005	23 mg/l	53.5 mg/l
BOD ₅ , Monthly Avg.	001	August 2005	10 mg/l	10.6 mg/l
BOD ₅ , Monthly Avg.	001	September 2005	10 mg/l	13.1 mg/l
TSS, Monthly Avg.	001	September 2005	15 mg/l	28.7 mg/l
TSS, Weekly Avg.	001	September 2005	23 mg/l	80.8 mg/l
BOD ₅ , Monthly Avg.	001	October 2005	10 mg/l	12.7 mg/l
BOD ₅ , Weekly Avg.	001	October 2005	15 mg/l	22.0 mg/l
BOD ₅ , Monthly Avg.	001	November 2005	10 mg/l	17.9 mg/l
BOD ₅ , Weekly Avg.	001	November 2005	15 mg/l	19.4 mg/l
TSS, Monthly Avg.	001	November 2005	15 mg/l	18.8 mg/l
TSS, Weekly Avg.	001	November 2005	23 mg/l	37.6 mg/l
BOD ₅ , Monthly Avg.	001	December 2005	10 mg/l	27.1 mg/l
BOD ₅ , Weekly Avg.	001	December 2005	15 mg/l	39.4 mg/l
TSS, Monthly Avg.	001	December 2005	15 mg/l	32.2 mg/l
TSS, Weekly Avg.	001	December 2005	23 mg/l	64.0 mg/l
BOD ₅ , Monthly Avg.	001	January 2006	10 mg/l	21.6 mg/l
BOD ₅ , Weekly Avg.	001	January 2006	15 mg/l	24.7 mg/l
TSS, Monthly Avg.	001	January 2006	15 mg/l	57.0 mg/l
TSS, Weekly Avg.	001	January 2006	23 mg/l	97.0 mg/l
BOD ₅ , Monthly Avg.	001	March 2006	10 mg/l	13.9 mg/l
BOD ₅ , Weekly Avg.	001	March 2006	15 mg/l	27.6 mg/l
BOD ₅ , Monthly Avg.	001	April 2006	10 mg/l	28.1 mg/l
BOD ₅ , Weekly Avg.	001	April 2006	15 mg/l	57.2 mg/l
TSS, Weekly Avg.	001	April 2006	23 mg/l	27.2 mg/l
BOD ₅ , Monthly Avg.	001	May 2006	10 mg/l	47.9 mg/l
BOD ₅ , Weekly Avg.	001	May 2006	15 mg/l	97.2 mg/l
TSS, Monthly Avg.	001	May 2006	15 mg/l	27.7 mg/l
TSS, Weekly Avg.	001	May 2006	23 mg/l	37.2 mg/l
Fecal Coliform, Weekly Avg.	001	May 2006	400 cfu/100 ml	1600 cfu/100 ml
BOD ₅ , Monthly Avg.	001	June 2006	10 mg/l	32.6 mg/l
BOD ₅ , Weekly Avg.	001	June 2006	15 mg/l	44.2 mg/l

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TSS, Monthly Avg.	001	June 2006	15 mg/l	25.6 mg/l
TSS, Weekly Avg.	001	June 2006	23 mg/l	42.0 mg/l
BOD ₅ , Monthly Avg.	001	July 2006	10 mg/l	21.5 mg/l
BOD ₅ , Weekly Avg.	001	July 2006	15 mg/l	23.6 mg/l
TSS, Monthly Avg.	001	July 2006	15 mg/l	34.8 mg/l
TSS, Weekly Avg.	001	July 2006	23 mg/l	50.0 mg/l
Fecal Coliform, Weekly Avg.	001	July 2006	400 cfu/100 ml	3600 cfu/100 ml
BOD ₅ , Monthly Avg.	001	August 2006	10 mg/l	36.8 mg/l
BOD ₅ , Weekly Avg.	001	August 2006	15 mg/l	46.5 mg/l
TSS, Monthly Avg.	001	August 2006	15 mg/l	68.4 mg/l
TSS, Weekly Avg.	001	August 2006	23 mg/l	80.0 mg/l
BOD ₅ , Monthly Avg.	001	September 2006	10 mg/l	25.1 mg/l
BOD ₅ , Weekly Avg.	001	September 2006	15 mg/l	27.4 mg/l
TSS, Monthly Avg.	001	September 2006	15 mg/l	36.6 mg/l
TSS, Weekly Avg.	001	September 2006	23 mg/l	73.3 mg/l
BOD ₅ , Monthly Avg.	001	October 2006	10 mg/l	35.2 mg/l
BOD ₅ , Weekly Avg.	001	October 2006	15 mg/l	50.1 mg/l
TSS, Monthly Avg.	001	October 2006	15 mg/l	32.4 mg/l
TSS, Weekly Avg.	001	October 2006	23 mg/l	40.0 mg/l
BOD ₅ , Monthly Avg.	001	November 2006	10 mg/l	35.6 mg/l
BOD ₅ , Weekly Avg.	001	November 2006	15 mg/l	45.4 mg/l
TSS, Monthly Avg.	001	November 2006	15 mg/l	34.1 mg/l
TSS, Weekly Avg.	001	November 2006	23 mg/l	49.3 mg/l
BOD ₅ , Weekly Avg.	001	November 2006	15 mg/l	45.4 mg/l
TSS, Monthly Avg.	001	November 2006	15 mg/l	34.1 mg/l
TSS, Weekly Avg.	001	November 2006	23 mg/l	49.3 mg/l
BOD ₅ , Monthly Avg.	001	December 2006	10 mg/l	25.6 mg/l
BOD ₅ , Weekly Avg.	001	December 2006	15 mg/l	38.9 mg/l
TSS, Monthly Avg.	001	December 2006	15 mg/l	29.5 mg/l
TSS, Weekly Avg.	001	December 2006	23 mg/l	52.9 mg/l
Fecal Coliform, Weekly Avg.	001	December 2006	400 cfu/100 ml	844 cfu/100 ml
BOD ₅ , Monthly Avg.	001	January 2007	10 mg/l	58.6 mg/l
BOD ₅ , Weekly Avg.	001	January 2007	15 mg/l	117.9 mg/l
TSS, Monthly Avg.	001	January 2007	15 mg/l	30.5 mg/l
TSS, Weekly Avg.	001	January 2007	23 mg/l	36.7 mg/l
BOD ₅ , Monthly Avg.	001	February 2007	10 mg/l	32.2 mg/l
BOD ₅ , Weekly Avg.	001	February 2007	15 mg/l	39.6 mg/l
TSS, Monthly Avg.	001	February 2007	15 mg/l	38.1 mg/l
TSS, Weekly Avg.	001	February 2007	23 mg/l	59.1 mg/l
Fecal Coliform, Weekly Avg.	001	February 2007	400 cfu/100 ml	TNTC
BOD ₅ , Monthly Avg.	001	March 2007	10 mg/l	38.3 mg/l
BOD ₅ , Weekly Avg.	001	March 2007	15 mg/l	45.9 mg/l
TSS, Monthly Avg.	001	March 2007	15 mg/l	28.0 mg/l
TSS, Weekly Avg.	001	March 2007	23 mg/l	44.1 mg/l
BOD ₅ , Monthly Avg.	001	April 2007	10 mg/l	39.4 mg/l
BOD ₅ , Weekly Avg.	001	April 2007	15 mg/l	47.2 mg/l
TSS, Monthly Avg.	001	April 2007	15 mg/l	56.1 mg/l
TSS, Weekly Avg.	001	April 2007	23 mg/l	66.7 mg/l
Fecal Coliform, Weekly Avg.	001	April 2007	400 cfu/100 ml	TNTC
BOD ₅ , Monthly Avg.	001	May 2007	10 mg/l	24.6 mg/l
BOD ₅ , Weekly Avg.	001	May 2007	15 mg/l	28.5 mg/l
TSS, Monthly Avg.	001	May 2007	15 mg/l	37.2 mg/l

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TSS, Weekly Avg.	001	May 2007	23 mg/l	72.6 mg/l
Fecal Coliform, Weekly Avg.	001	May 2007	400 cfu/100 ml	TNTC

Note: DMR for February 2006 was not present in the files.

XII.

ADDITIONAL INFORMATION:

The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional water quality studies and/or TMDL's. The DEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDL's for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as requested by the permittee and/or as necessary to achieve compliance with water quality standards. Therefore, prior to upgrading or expanding this facility, the permittee should contact the Department to determine the status of the work being done to establish future effluent limitations and additional permit conditions.

Final effluent loadings (i.e. lbs/day) have been established based upon the permit limit concentrations and the design capacity of 0.80 MGD.

Effluent loadings are calculated using the following example:

$$\text{BOD: } 8.34 \text{ gal/lb} \times 0.80 \text{ MGD} \times 10 \text{ mg/l} = 66.7 \text{ lb/day}$$

At present, the Monitoring Requirements, Sample Types, and Frequency of Sampling as shown in the permit are standard for facilities of flows between 0.50 and 1.0 MGD.

Effluent Characteristics**Monitoring Requirements**

	<u>Measurement</u>	<u>Sample</u>
	<u>Frequency</u>	<u>Type</u>
Flow	Continuous	Recorder
BOD ₅	1/week	3 Hr. Composite
Total Suspended Solids	1/week	3 Hr. Composite
Fecal Coliform Bacteria	1/week	Grab
pH	1/week	Grab

Pretreatment Requirements

Based upon consultation with LDEQ pretreatment personnel, general pretreatment language will be used due to the lack of either an approved or required pretreatment program.

Pollution Prevention Requirements

The permittee shall institute or continue programs directed towards pollution prevention. The permittee shall institute or continue programs to improve the operating efficiency and extend the useful life of the facility. The permittee will complete an annual Environmental Audit Report **each year** for the life of this permit according to the schedule below. The permittee will accomplish this requirement by completing the Environmental Audit Form which has been attached to the permit. All other requirements of the Municipal Wastewater Pollution Prevention Program are contained in Part II of the permit.

The audit evaluation period is as follows:

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Audit period Begins	Audit Period Ends	Audit Report Completion Date
Effective Date of Permit	12 Months from Audit Period Beginning Date	3 Months from Audit Period Ending Date

XIII TENTATIVE DETERMINATION:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to issue a new permit for the discharge described in this Statement of Basis.

XIV REFERENCES:

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 8, "Wasteload Allocations / Total Maximum Daily Loads and Effluent Limitations Policy," Louisiana Department of Environmental Quality, 2005.

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 5, "Water Quality Inventory Section 305(b) Report," Louisiana Department of Environmental Quality, 1998.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Chapter 11 - "Louisiana Surface Water Quality Standards," Louisiana Department of Environmental Quality, 2004.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Subpart 2 - "The LPDES Program," Louisiana Department of Environmental Quality, 2004.

Low-Flow Characteristics of Louisiana Streams, Water Resources Technical Report No. 22, United States Department of the Interior, Geological Survey, 1980.

Index to Surface Water Data in Louisiana, Water Resources Basic Records Report No. 17, United States Department of the Interior, Geological Survey, 1989.

LPDES Permit Application to Discharge Wastewater, Town of Zwolle, Zwolle Municipal Wastewater Facility, April 30, 2007.